Development of a Common, Symptom-Based Case Definition for Gastroenteritis: An International Analysis

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{MAX 1900 CHARACTERS, NO SPACES; Current count =1709}

Background. Population-based studies often define gastroenteritis (GE) clinically, with symptom-based case definitions classifying individuals as cases or non-cases. Comparing results between studies is difficult since different definitions are used. Our objective was to evaluate the impact of using different case definitions for GE, and to develop a common symptom-based case definition and a set of results to facilitate future inter-country comparisons.

Methods. We applied four published symptom-based definitions for GE to population-based survey data from several countries to assess the effect of case definition on the observed burden of illness. The definitions were: (1) ≥3 loose stools in 24 hours lasting >1 day, or resulting in activity restriction; excluding those with chronic diarrheal illness; (2) ≥3 loose stools; or bloody stool; or vomiting with one of diarrhea, cramps/abdominal pain, or fever in 24 hours; excluding those reporting their illness was due to non-infectious causes; (3) ≥1 loose stool or vomiting in 24 hours, excluding those reporting their illness was due to non-infectious causes; and (4) ≥3 loose stools in 24 hours; or ≥3 of vomiting, nausea, abdominal cramps, or fever; excluding those with chronic diarrheal illness.

Results. The definition used impacted the burden of illness observed. Within country, the monthly prevalence differed by 1.5 to 2.5 times under the four case definitions. The observed prevalence ranged as follows: Australia, 4.0% to10.1%; Canada, 6.5% to10.0%; Ireland, 3.3% to 5.8%; Malta, 2% to 3%, and the United States, 7.2% to 12.4%. Other variables impacted included mean age of cases, and the proportion seeking health care.

Conclusions. To ensure comparability of results among international studies, a standard definition and a minimum set of results for reporting population-based data on the burden of GE is being developed in consultation with the International Collaboration on Enteric Disease 'Burden of Illness' Studies Network.